

Winter Stream Chlorides

Dr. Karen Wilson

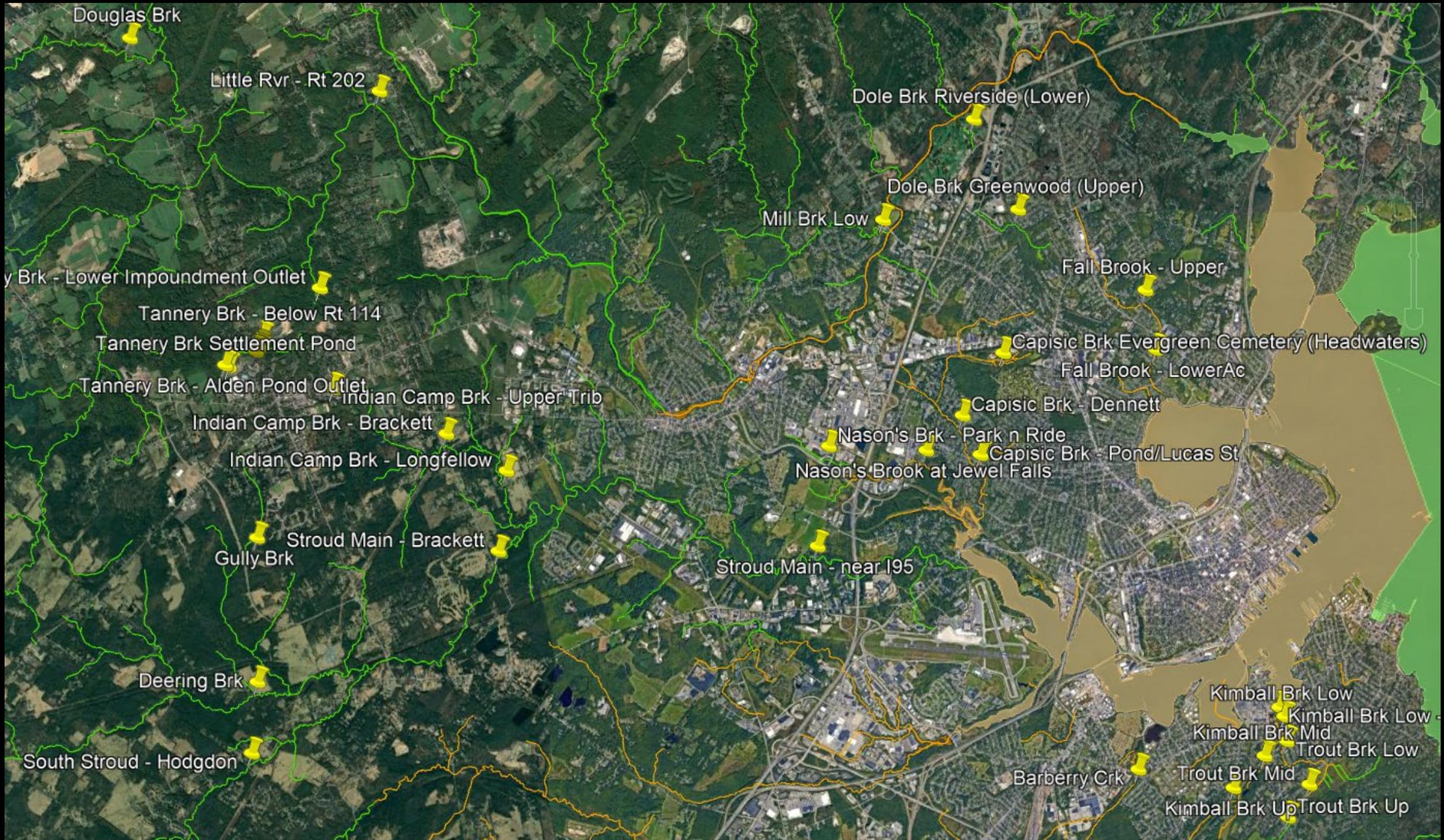
University of Southern Maine

ESP 306 Water Quality Assessment & Control

Study Design & Methods

- ± 14 Rural, Suburban or Urban streams, ~ 30 sites total
- Most streams have an upper and lower watershed site

- Sites sampled by two students once a week from February to April (8 weeks) in 2015, 2017, 2019, 2021, 2023 (and next 2025)
- Students took 1 liter water samples, photos, field notes
- Samples analyzed for chloride in the lab using YSI Chloride sensor (ISE 1005) on a Professional Plus meter with a Quatro-Pro cable.



Douglas Brk

Little Rvr - Rt 202

Dole Brk Riverside (Lower)

Dole Brk Greenwood (Upper)

Mill Brk Low

Fall Brook - Upper

y Brk - Lower Impoundment Outlet

Tannery Brk - Below Rt 114

Tannery Brk Settlement Pond

Capasic Brk Evergreen Cemetery (Headwaters)

Fall Brook - LowerAc

Tannery Brk - Alden Pond Outlet

Indian Camp Brk - Upper Trib

Capasic Brk - Dennett

Indian Camp Brk - Brackett

Nason's Brk - Park n Ride

Nason's Brook at Jewel Falls

Indian Camp Brk - Longfellow

Stroud Main - Brackett

Stroud Main - near I95

Gully Brk

Deering Brk

Kimball Brk Low

Kimball Brk Low -

Kimball Brk Mid

Trout Brk Low

South Stroud - Hodgdon

Barberry Crk

Trout Brk Mid

Kimball Brk Up

Trout Brk Up

2023 data

Students “blogged” each visit to their sites, recording weather, estimated stream depth, ice cover, etc.

Trout Brook



Red Brook Lower



Week 0

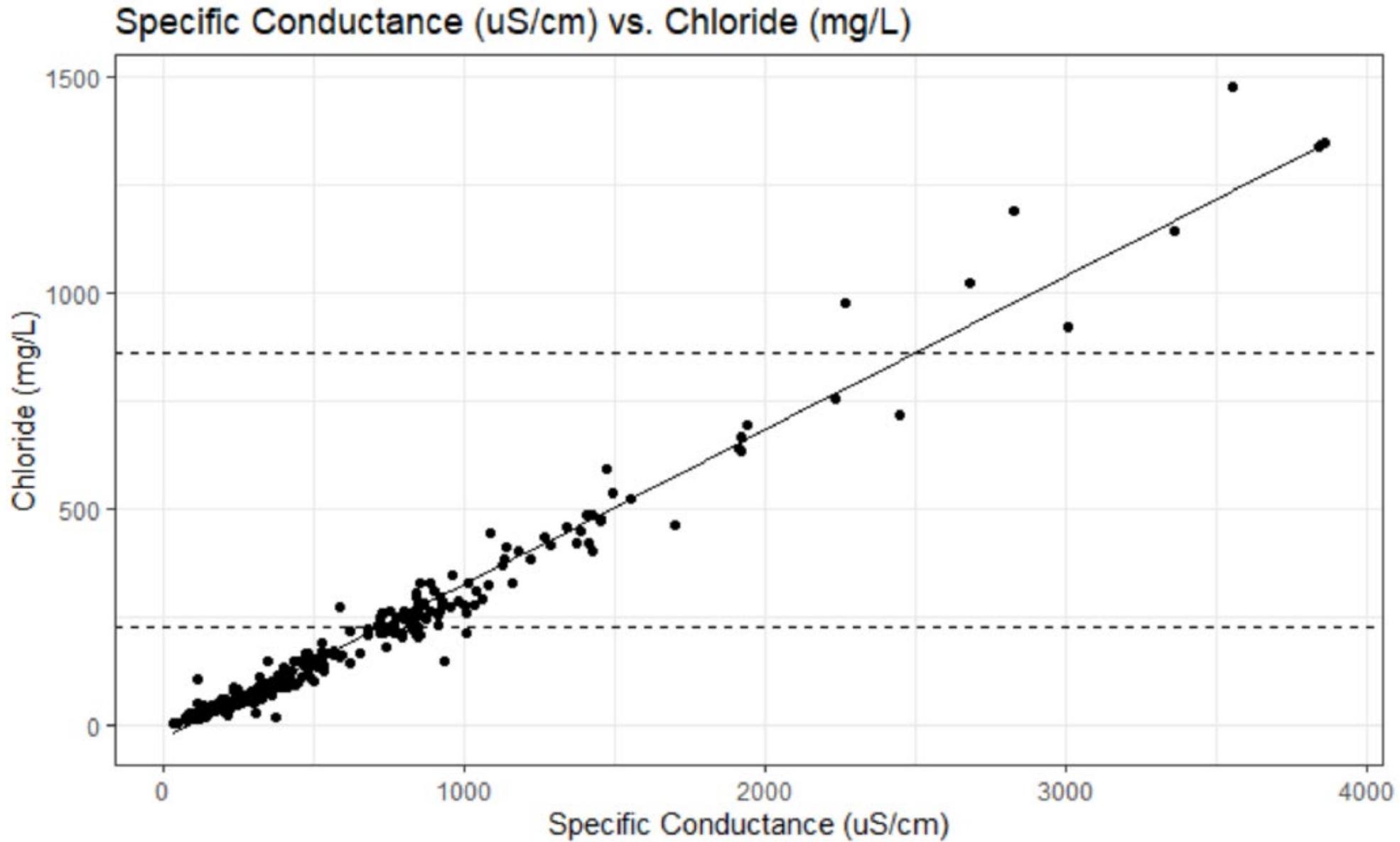
Week 4

Week 5

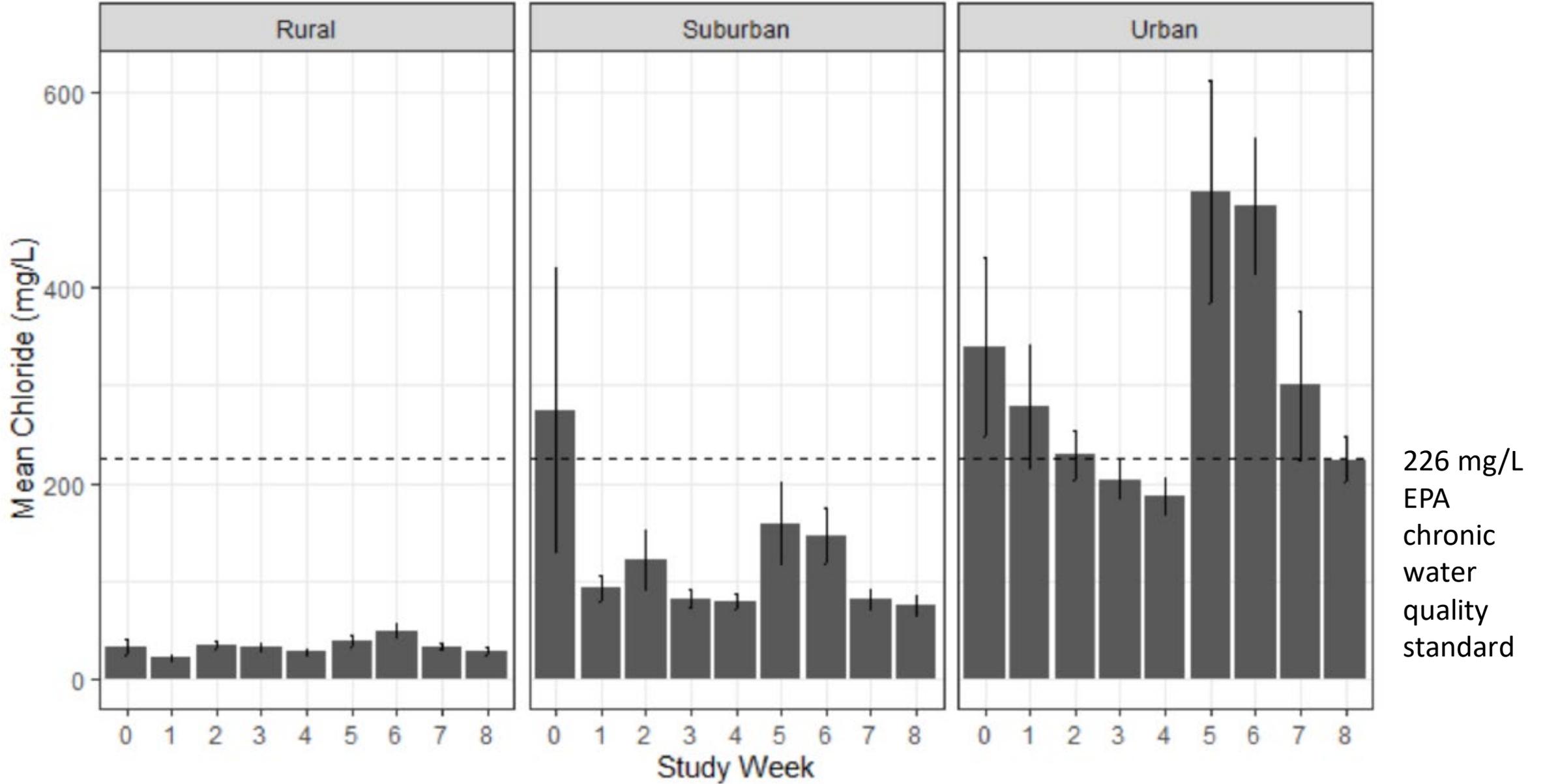
Week 7

2023

Photos: B. Determan



Mean Chloride in Rural, Urban, and Suburban Streams



226 mg/L
EPA
chronic
water
quality
standard



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